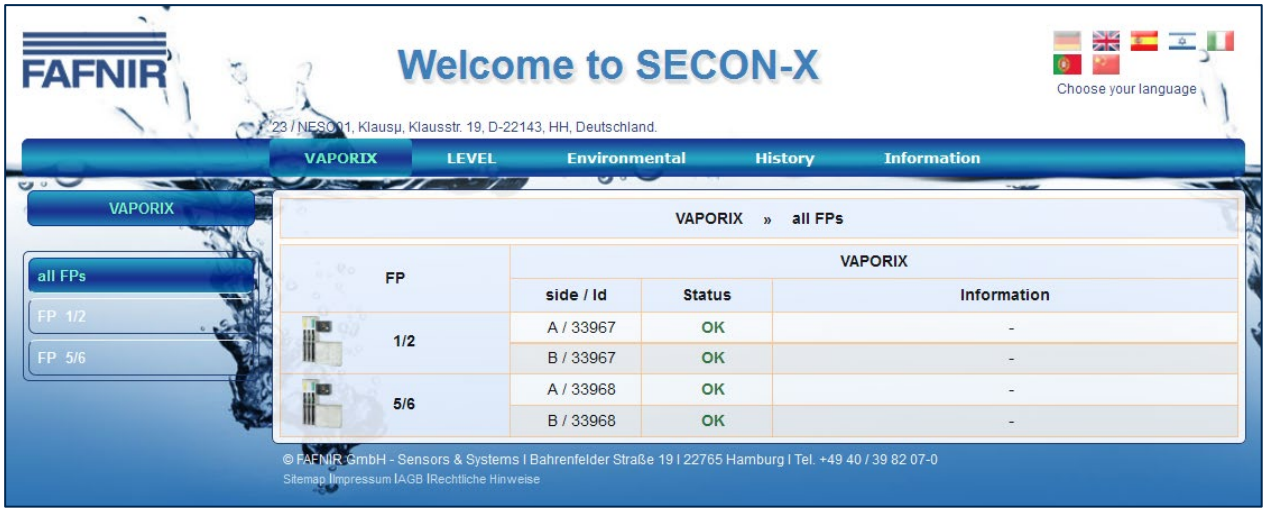
Technical Documentation

SECON-X

SECON-Vap user manual



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1 Overview

1.1 SECON-X system components

SECON-X is a hardware-software network system which comprises several components (see figure below) and performs the following tasks:

- Global data access with web interface with SECON clients
- Remote diagnostics
- Remote display, evaluation and data storage
- Universal data format

SECON-Vap is the display module software for the SECON devices (SECON clients).

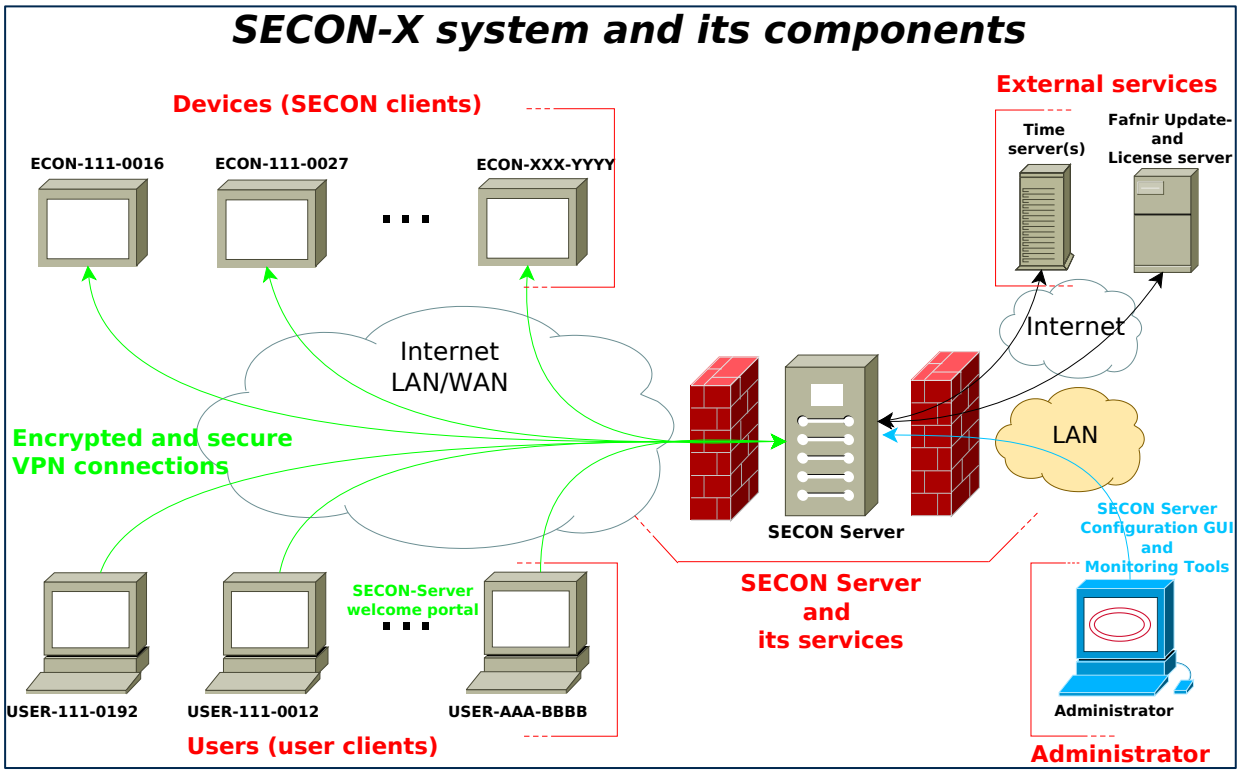


Figure 1: SECON-X system and components

For installation and operation of the SECON client, see technical documentation:

- SECON client, art. no. 350076

1.2 SECON-Vap

SECON-Vap is an optional component of the VAPORIX automatic monitoring device; it monitors and assesses vapour recovery on the fuel pumps.

As a central signalling device, the SECON-Vap is used to display the functional status of vapour recovery and of the VAPORIX system.

The display component is a TFT colour screen. All functions are accessible using the touch screen user interface.

SECON-Vap is connected to the control units for the VAPORIX system for all petrol pumps (16 control units = 32 fuelling points) and can signal both optically and audibly if a fuelling point has a fault. This means that the responsible technical service can be informed immediately, and that the cause of the disturbance can be resolved.

If the vapour recovery or VAPORIX system is not functioning properly, and the error is remedied punctually, the control unit automatically switches the affected fuelling point off. The system can display all the relevant service information in addition to displaying faults. With the SECON, alarms are signalled audibly by a buzzer as well as visually.

1.3 About this document

This documentation describes the functioning and use of the software as a local application on SECON clients, as well as use by remote access via a web browser (USER clients).

To configure the SECON-Vap software and install the VPN software for remote access, see technical documentation:

- SECON-Vap Administrator, art. no.: 350134

1.4 Safety information

The SECON-Vap software is designed for use in the petrol station sector and is used to monitor vapour recovery at petrol pumps. The system must be used exclusively for this purpose. Please observe and follow all product safety notes and operating instructions. The manufacturer accepts no liability for any form of damage resulting from improper use!

The SECON-X system has been developed, manufactured and tested in accordance with the latest good engineering practices and recognised technical safety regulations. Nevertheless, the system may be a source of danger. The following safety precautions must be observed in order to reduce the risk of injury, electric shocks, fire or damage to the equipment:

- Do not change or modify the system or add any equipment without the prior - consent of the manufacturer.
- Only use original parts. These are in line with the technical requirements specified by the manufacturer.
- The installation, operation and maintenance of the SECON, together with the SECON-Vap software, may only be carried out by expert personnel.
- Operators, installers and service technicians must observe all applicable safety rules and regulations. This also applies to any local safety and accident prevention regulations which are not specified in these operating instructions.

If these safety instructions are not observed, it may result in the risk of accident or damage to the SECON-X system.

The SECON touch screen may only be operated using a finger or a stylus designed for this purpose. The use of pointed objects (e.g. screwdrivers, pens) may cause damage to the touch screen.

Useful tips and information in this manual that should be observed are written in italics and identified by this symbol.

2 SECON-Vap as a local application on the SECON clients

Certain functions may be activated or deactivated depending on what the software is being used for. In the case of the SECON-VAP, for example, the "Level" function is deactivated.

The lock symbol indicates an existing VPN connection.

2.1 Display of the SECON clients

2.1.1 Fuelling points

Figure 2: VAPORIX main menu

The main view shows the status of the individual VAPORIX-Controls / fuelling points. When a petrol pump (e.g. ZP 1/2) is selected, the window shown below is displayed (see Figure 3).

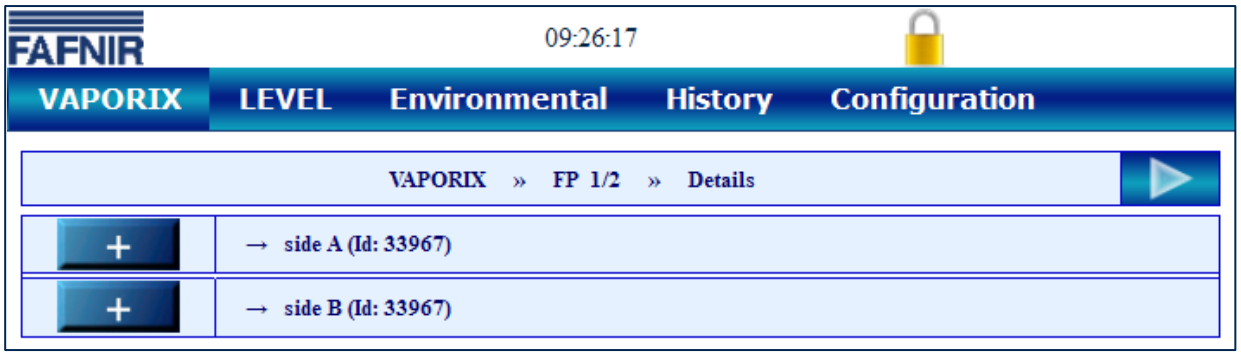


Figure 3: Fuelling point 1/2

If you click on the PLUS sign, the status, date and the measured values for an individual fuelling point are displayed (see figure below):

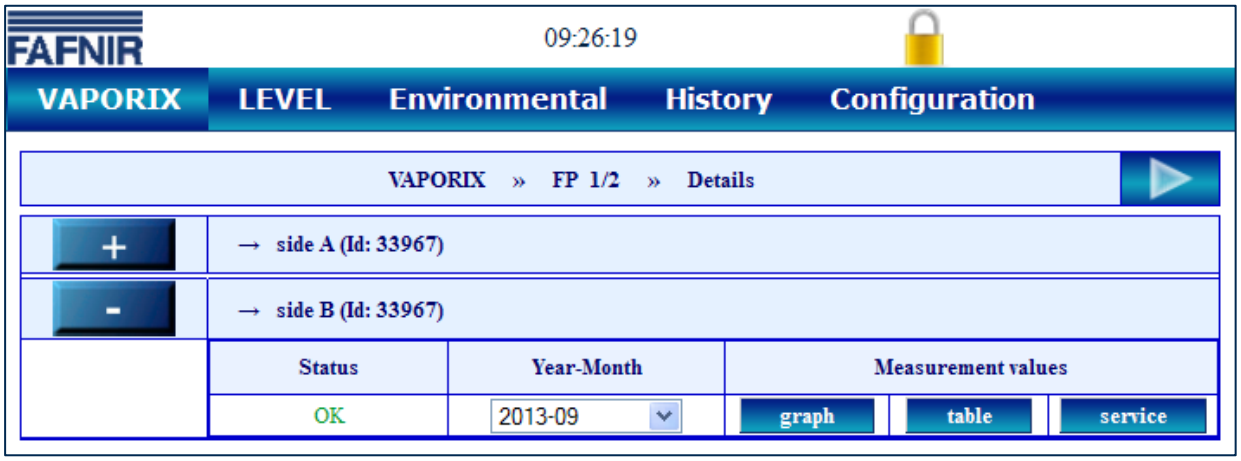


Figure 4: Fuelling point 1/2 – details

Status: OK, WARNING or ERROR

Year-month: Period for which measured values are displayed

Measured values:

- **graph:** graphic display of the recorded data (see Figure 5)
- **table:** tabular display of the recorded data (see Figure 6)
- **service:** tabular display of the services deployed (see Figure 7)

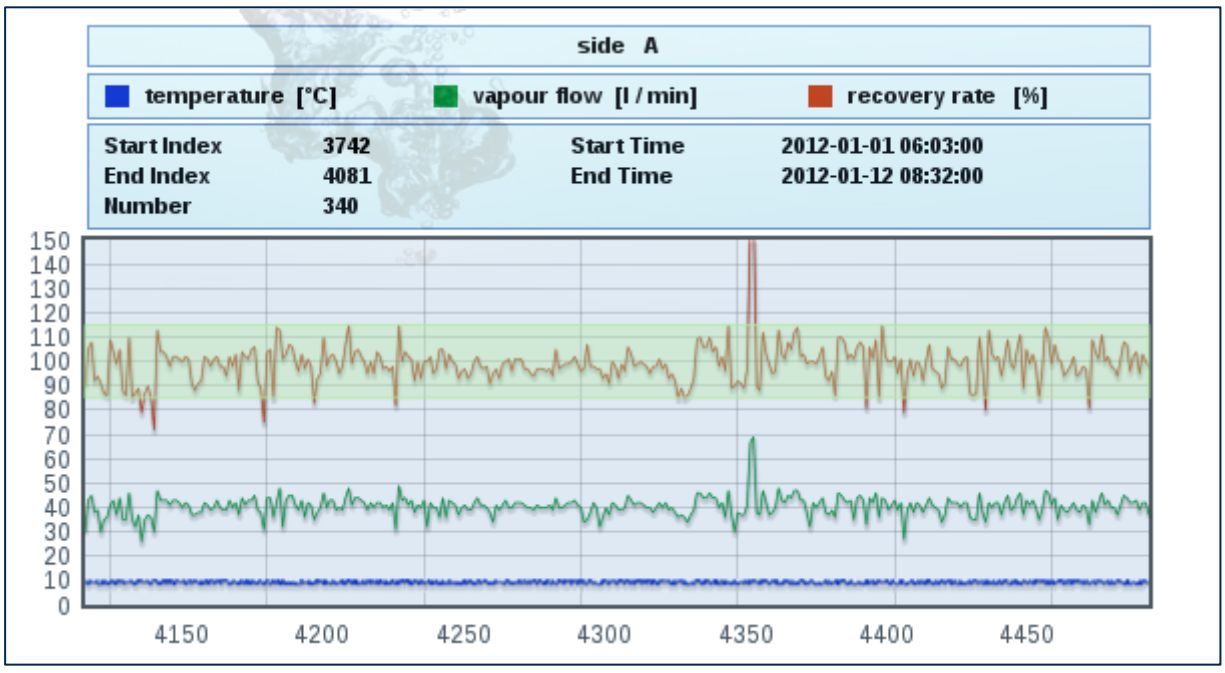
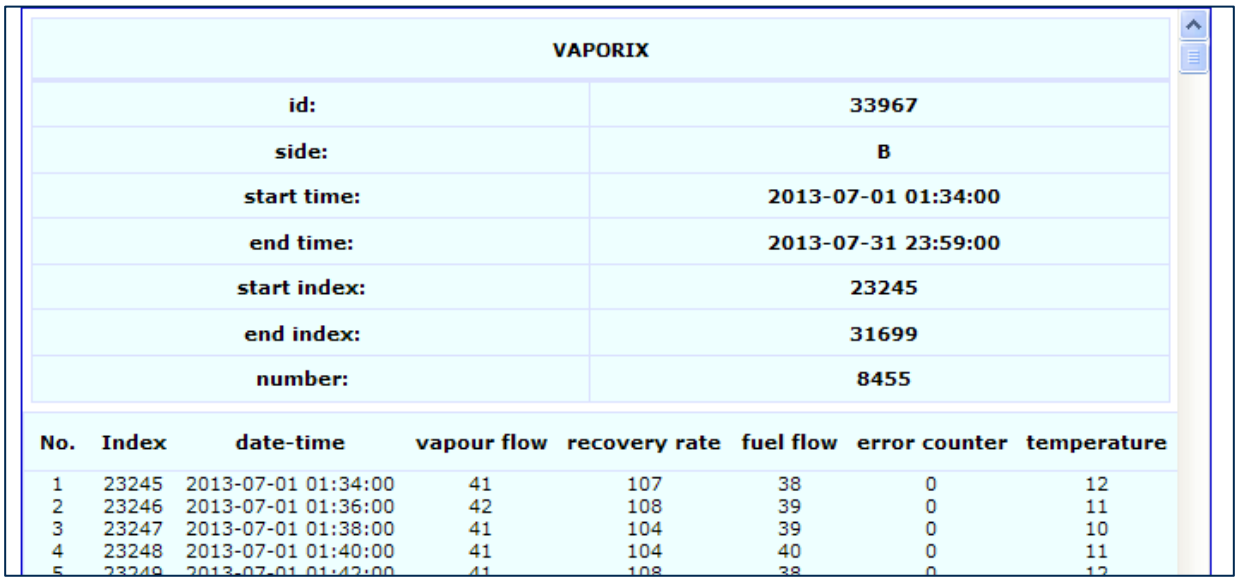


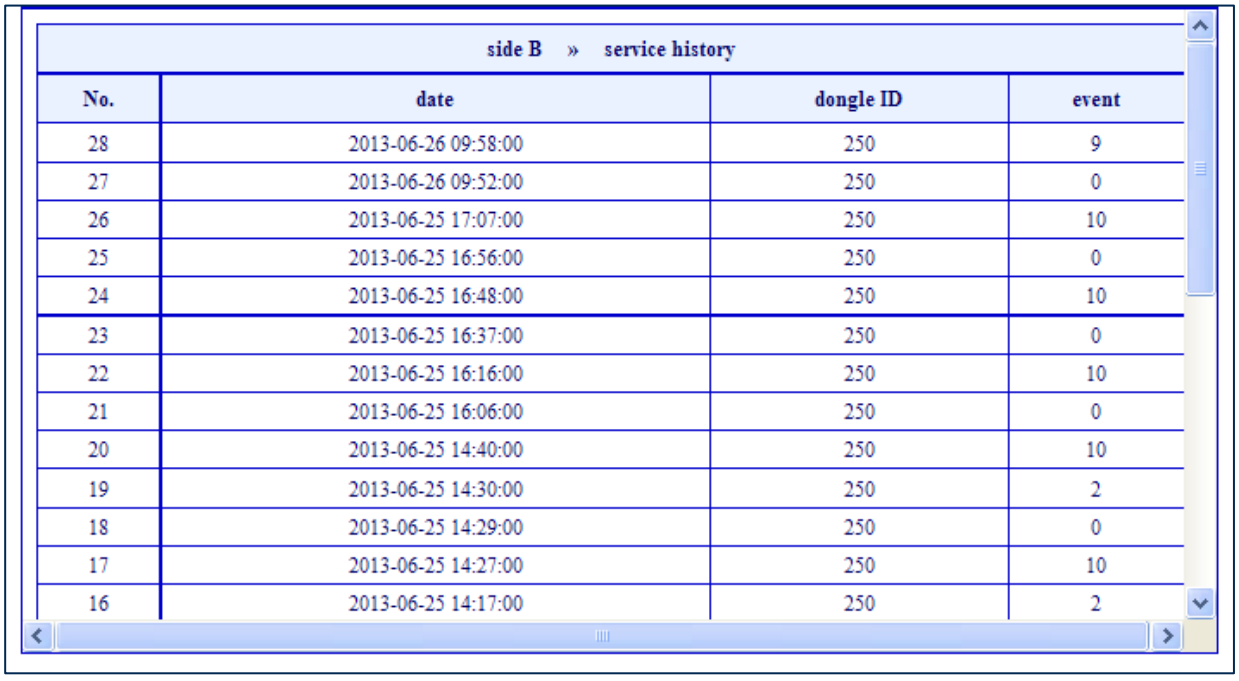
Figure 5: Fuelling point 1/2 – Details – Graph



VAPORIX	
id:	33967
side:	B
start time:	2013-07-01 01:34:00
end time:	2013-07-31 23:59:00
start index:	23245
end index:	31699
number:	8455

No.	Index	date-time	vapour flow	recovery rate	fuel flow	error counter	temperature
1	23245	2013-07-01 01:34:00	41	107	38	0	12
2	23246	2013-07-01 01:36:00	42	108	39	0	11
3	23247	2013-07-01 01:38:00	41	104	39	0	10
4	23248	2013-07-01 01:40:00	41	104	40	0	11
5	23249	2013-07-01 01:42:00	41	108	38	0	12

Figure 6: Fuelling point 1/2 – Details – Table



side B » service history			
No.	date	dongle ID	event
28	2013-06-26 09:58:00	250	9
27	2013-06-26 09:52:00	250	0
26	2013-06-25 17:07:00	250	10
25	2013-06-25 16:56:00	250	0
24	2013-06-25 16:48:00	250	10
23	2013-06-25 16:37:00	250	0
22	2013-06-25 16:16:00	250	10
21	2013-06-25 16:06:00	250	0
20	2013-06-25 14:40:00	250	10
19	2013-06-25 14:30:00	250	2
18	2013-06-25 14:29:00	250	0
17	2013-06-25 14:27:00	250	10
16	2013-06-25 14:17:00	250	2

Figure 7: Fuelling point 1/2 – Details – Service

2.1.2 Alarms

Alarms generated by the VAPORIX system are displayed as follows:

The yellow alarm symbol indicates a **warning**.

The red alarm symbol indicates an **error**.

The grey alarm symbol indicates that the status cannot be requested.

For the meaning of the warnings and alarms, see technical documentation:

- VAPORIX Flow and Control, art. no. 207083

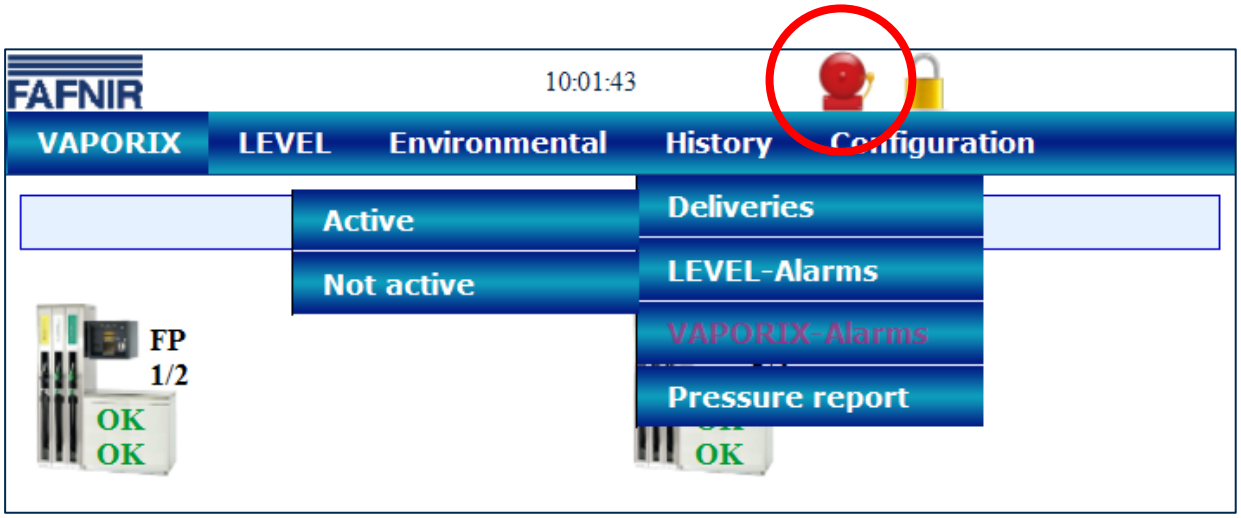


Figure 8: VAPORIX alarms

In the menu, the user can choose between active and inactive alarms:

- Active alarms are confirmed or unconfirmed alarms that are currently available.
- Inactive alarms are expired alarms that have been cancelled by the system.

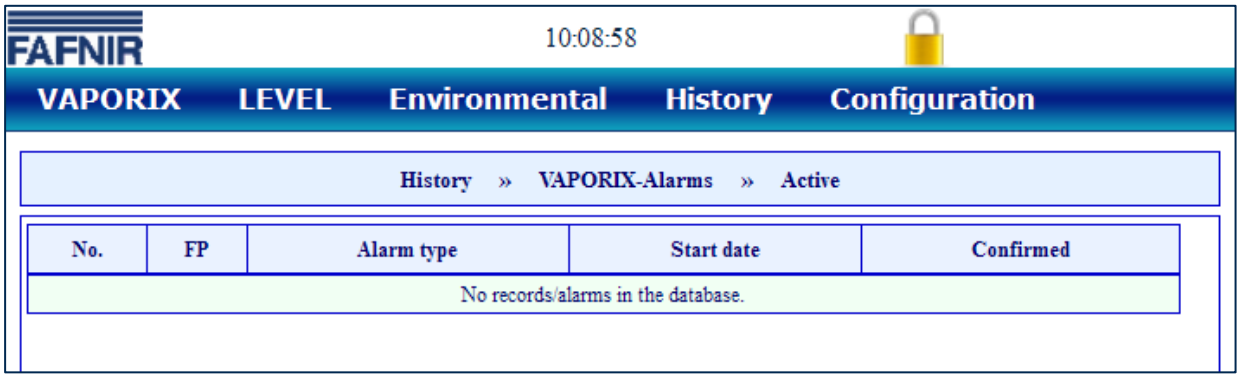


Figure 9: Active alarms

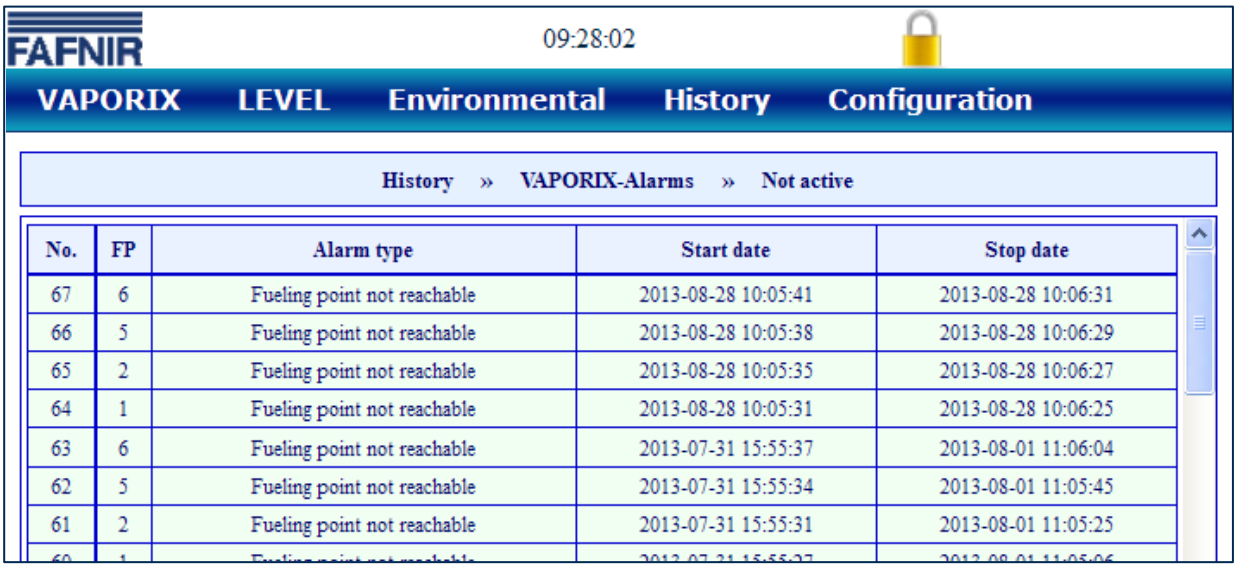

FAFNIR
09:28:02
VAPORIX
LEVEL
Environmental
History
Configuration
History » VAPORIX-Alarms » Not active
No. FP Alarm type Start date Stop date
67 6 Fueling point not reachable 2013-08-28 10:05:41 2013-08-28 10:06:31
66 5 Fueling point not reachable 2013-08-28 10:05:38 2013-08-28 10:06:29
65 2 Fueling point not reachable 2013-08-28 10:05:35 2013-08-28 10:06:27
64 1 Fueling point not reachable 2013-08-28 10:05:31 2013-08-28 10:06:25
63 6 Fueling point not reachable 2013-07-31 15:55:37 2013-08-01 11:06:04
62 5 Fueling point not reachable 2013-07-31 15:55:34 2013-08-01 11:05:45
61 2 Fueling point not reachable 2013-07-31 15:55:31 2013-08-01 11:05:25

Figure 10: Inactive alarms

2.1.3 Information

The following sub-menus are displayed in the *Configuration* ≫ *Info* menu option:

- Station info
- Software version
- Software licence
- Current IP address
- Route table
- VPN

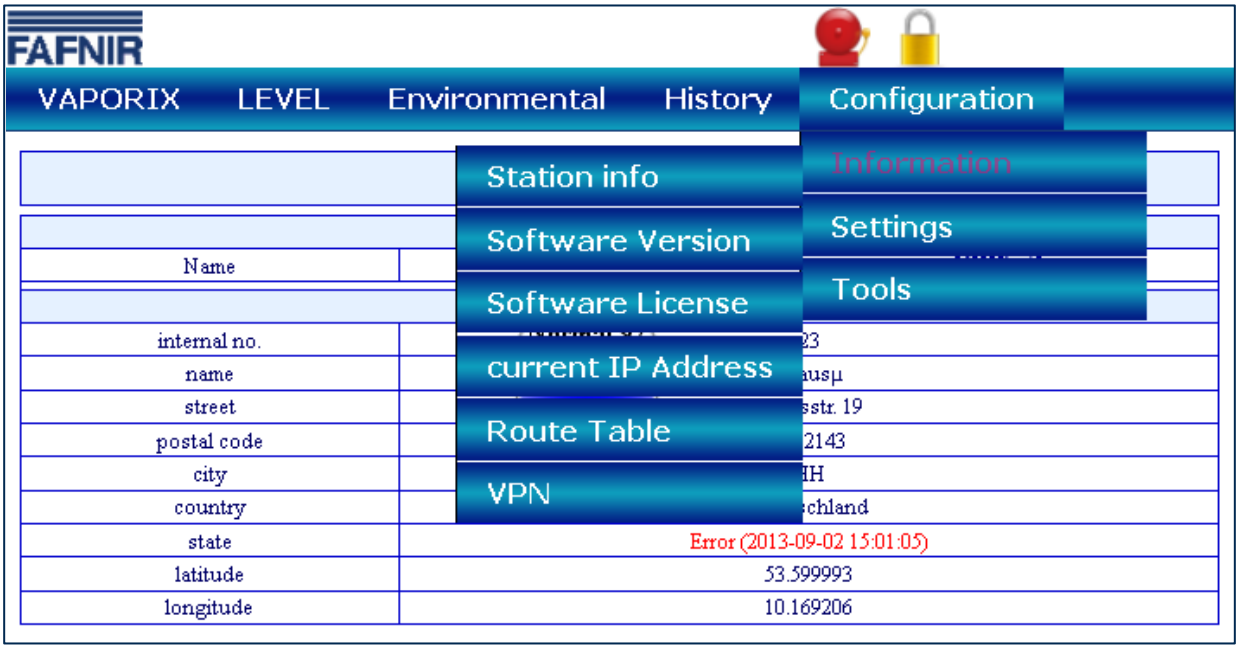
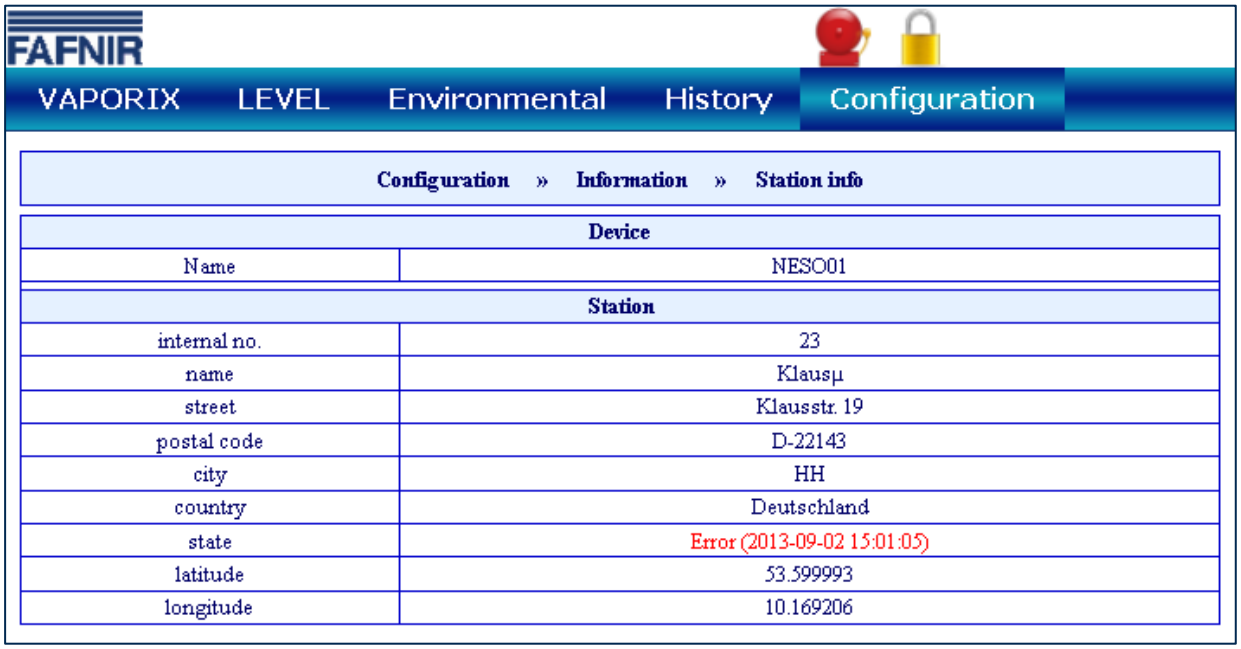


Figure 11: System information

Station info

The configured address, the geographical coordinates and the global status of the station are displayed in this table.



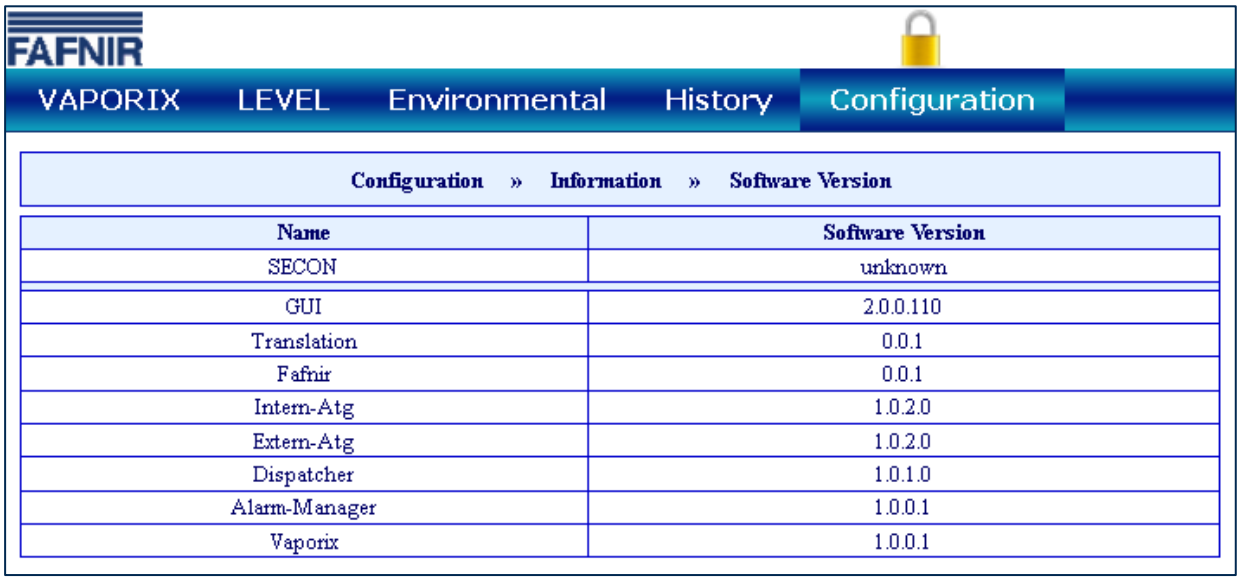
Configuration » Information » Station info

Device	
Name	NESO01
Station	
internal no.	23
name	Klausμ
street	Klausstr. 19
postal code	D-22143
city	HH
country	Deutschland
state	Error (2013-09-02 15:01:05)
latitude	53.599993
longitude	10.169206

Figure 12: Information – Station data

The "State" status is equivalent to the alarm messages and is displayed here in the colours green (OK), yellow (warning) and red (error).

Software version



Configuration » Information » Software Version

Name	Software Version
SECON	unknown
GUI	2.0.0.110
Translation	0.0.1
Fafnir	0.0.1
Intern-Atg	1.0.2.0
Extern-Atg	1.0.2.0
Dispatcher	1.0.1.0
Alarm-Manager	1.0.0.1
Vaporix	1.0.0.1

Figure 13: Information – Software version

Software licence

The menu option *Configuration ≫Information ≫ Software licence* is not supported yet.

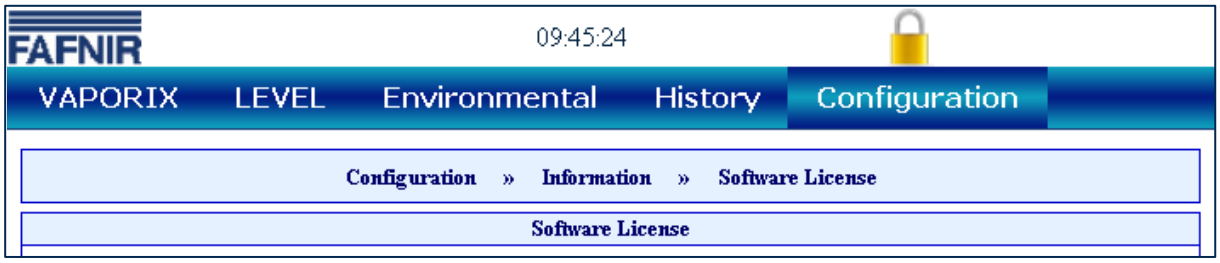
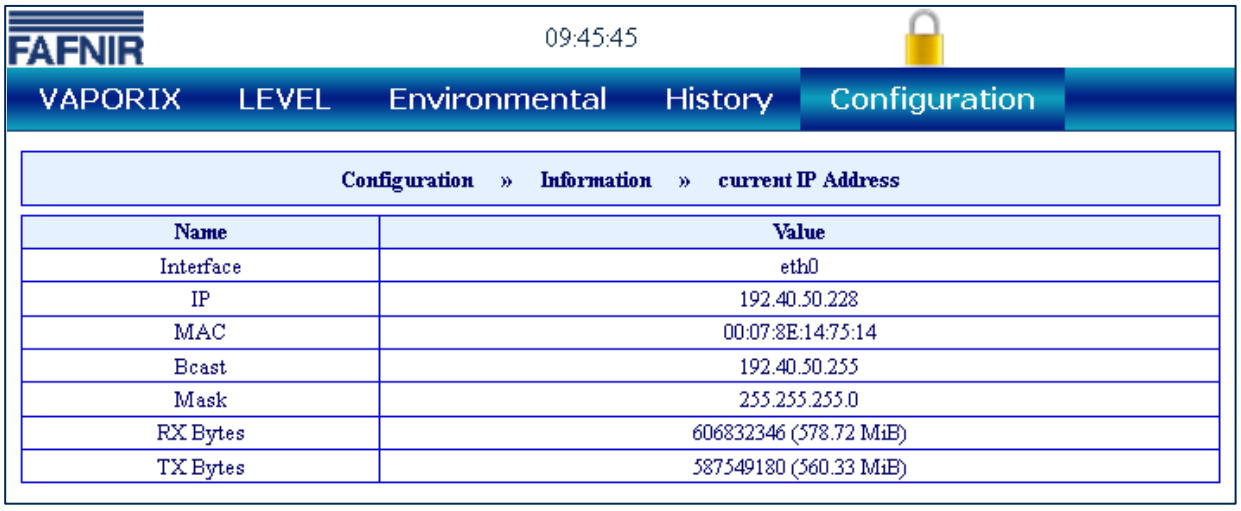


Figure 14: Information – Software licence

Current IP address

The current data and configurations for the local network connection are displayed here. The local connection and the VPN interface must be active in order to ensure that the system can be accessed externally.

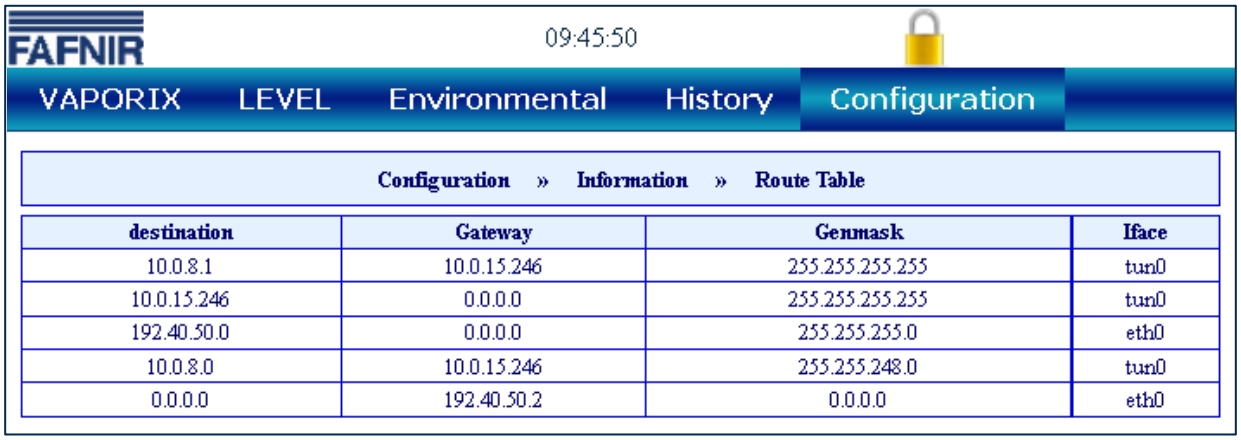


Name	Value
Interface	eth0
IP	192.40.50.228
MAC	00:07:8E:14:75:14
Bcast	192.40.50.255
Mask	255.255.255.0
RX Bytes	606832346 (578.72 MiB)
TX Bytes	587549180 (560.33 MiB)

Figure 15: Information – Current IP address

Route table

The routing IP addresses are listed here.



destination	Gateway	Genmask	Iface
10.0.8.1	10.0.15.246	255.255.255.255	tun0
10.0.15.246	0.0.0.0	255.255.255.255	tun0
192.40.50.0	0.0.0.0	255.255.255.0	eth0
10.0.8.0	10.0.15.246	255.255.248.0	tun0
0.0.0.0	192.40.50.2	0.0.0.0	eth0

Figure 16: Information – Route table

VPN

The current data and configurations for the virtual private network (VPN) are displayed here. The interface must be active in order to ensure that the system can be accessed externally.

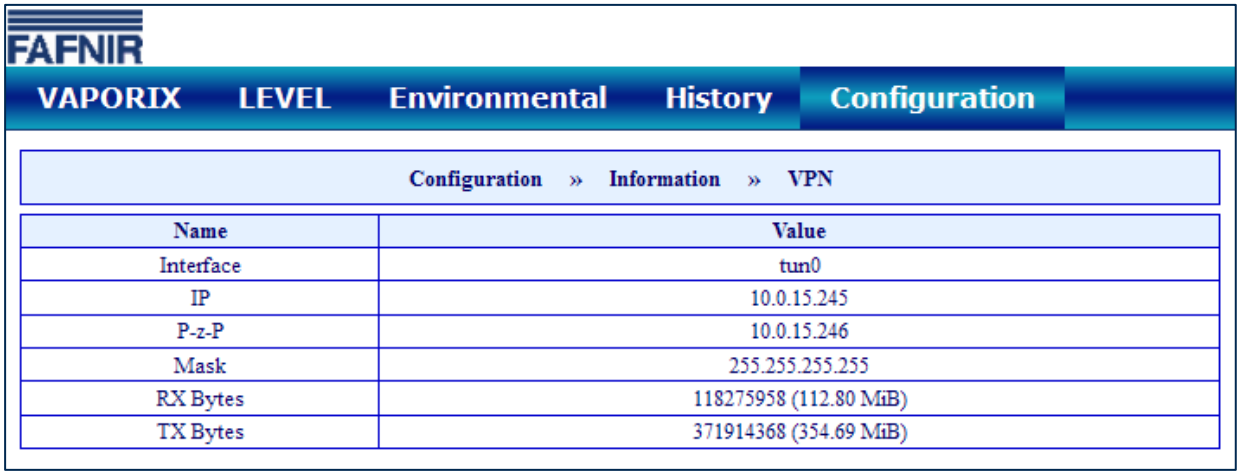


Figure 17: Information – VPN

3 Remote access by user clients

3.1 Connection to the SECON server

3.1.1 Requirements

☞ *For remote access by user clients to the SECON server, VPN software (preferably Open VPN) has to be installed on the PCs being used.*

☞ *For remote access, "Mozilla Firefox" or "Opera" are the preferred browsers. Full functionality may be restricted with other browsers.*

To install the VPN software, see the technical documentation:

- SECON-VAP Administrator, art. no. 350134

3.1.2 VPN connection

☞ *A secure VPN connection (TLS) is used for remote access, i.e. all the data is encrypted.*

(1) Start the program "OpenVPN GUI".

(2) The VPN connection is created by right clicking on the "OpenVPN GUI" symbol on the Windows taskbar and selecting "Connect".

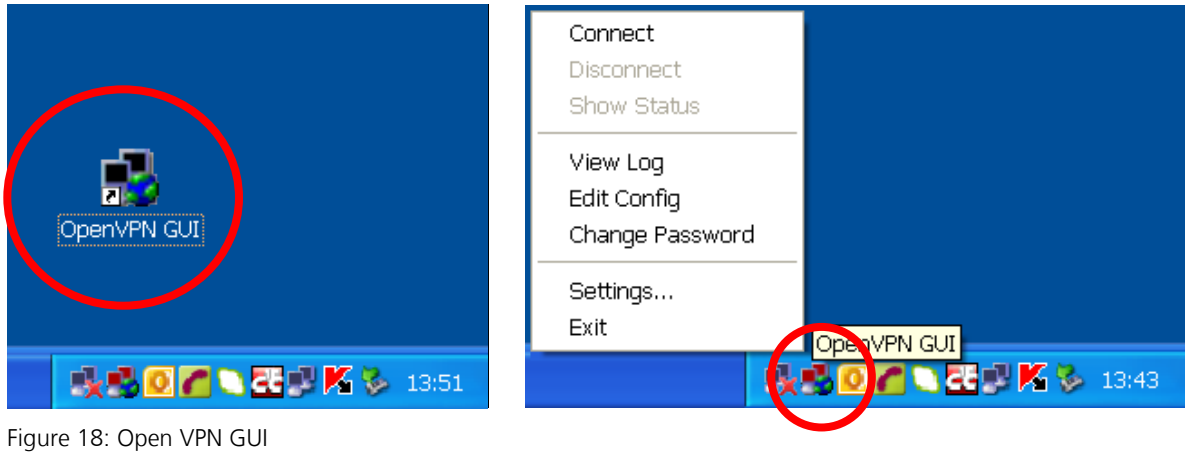


Figure 18: Open VPN GUI

When a connection is successfully created, the colour of the "OPEN VPN GUI" symbol in the Windows taskbar changes from red to green.

3.1.3 Browser

The home page for the SECON server can now be called using the web browser. To do this, enter the allocated IP address in the address line of the browser.

3.1.4 SECON Server home page

FAFNIR
Welcome to SECON-server
Choose your language
view
configuration
info
table
GoogleMaps
full screen
your objects
id
address
status
online
1 / ECON-003-0015 This SECON (petrol station) was not online yet -
2 559 / ECON-003-0016 SIVIM, ST.SIVIM. PETAH TIKVA, , Tel Aviv, Isreal Error -
3 TUV-1 / ECON-003-0026 TUV-1, Test-1, D-12345, Hamburg, Germany Warning -
4 TUV-2 / ECON-003-0028 TUV-2, Test-2, D-12345, Hamburg, Germany OK connect
5 - / ECON-003-0033 This SECON (petrol station) was not online yet - -
6 כתובת / ECON-003-0034 TUV-afüüüüüü, Alüäöstraße, D-12345, Hamburg, Germany OK connect
7 - / ECON-012-0017 This SECON (petrol station) was not online yet - -
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Figure 19: SECON Server home page

A table showing the configured petrol stations is displayed on the home page for the SECON server. Using Google Maps, the petrol station locations can also be displayed on a map.

Table view

In table view, all the petrol stations are displayed with their number, name, address, status and network connection:

No.: serial number
Internal ID: Internal petrol station number (see SECON-Vap configuration)
Address: Petrol station address
Status: Status of the SECON-Vap
(if the user hovers over this with the mouse, a data table is displayed)
Online: The network connection is displayed with "–" (not connected) or "connect" (connected).

The connection to the individual petrol stations is created by clicking on "Connect". To obtain access to the petrol stations, a password must be entered (see section on "Verification").

Google Maps / Full screen view

In order to display the petrol station locations on a map, select the menu option "View – Google Maps" or "View – Full screen".

Each individual pin represents a petrol station. A jumping pin indicates that the petrol station is online and that it can be accessed by clicking on it.

The colour indicates the status:

- Green: OK
- Yellow: Warning
- Red: Error

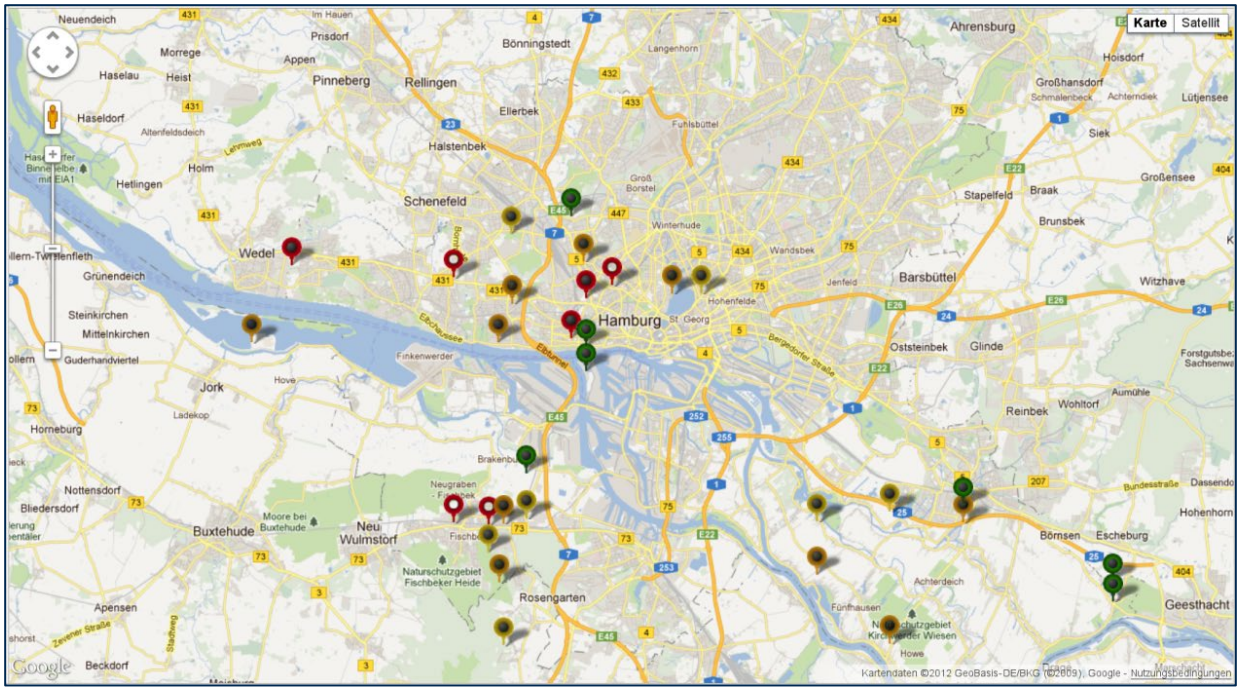

Figure 20: Station locations

In order to obtain detailed information regarding the petrol stations, all the user needs to do is to point at the relevant pin with the mouse. This opens a pop-up window showing further details.

Double clicking (left mouse button) on a pin creates a direct connection to the selected petrol station. To do this, a password must be entered (see next section).

In full screen view, the Google map is displayed without any further SECON menu bars.

☞ *The normal view is restored by clicking the Back button in the address line of the browser.*

3.1.5 Verification

A password is requested in order to verify the user:

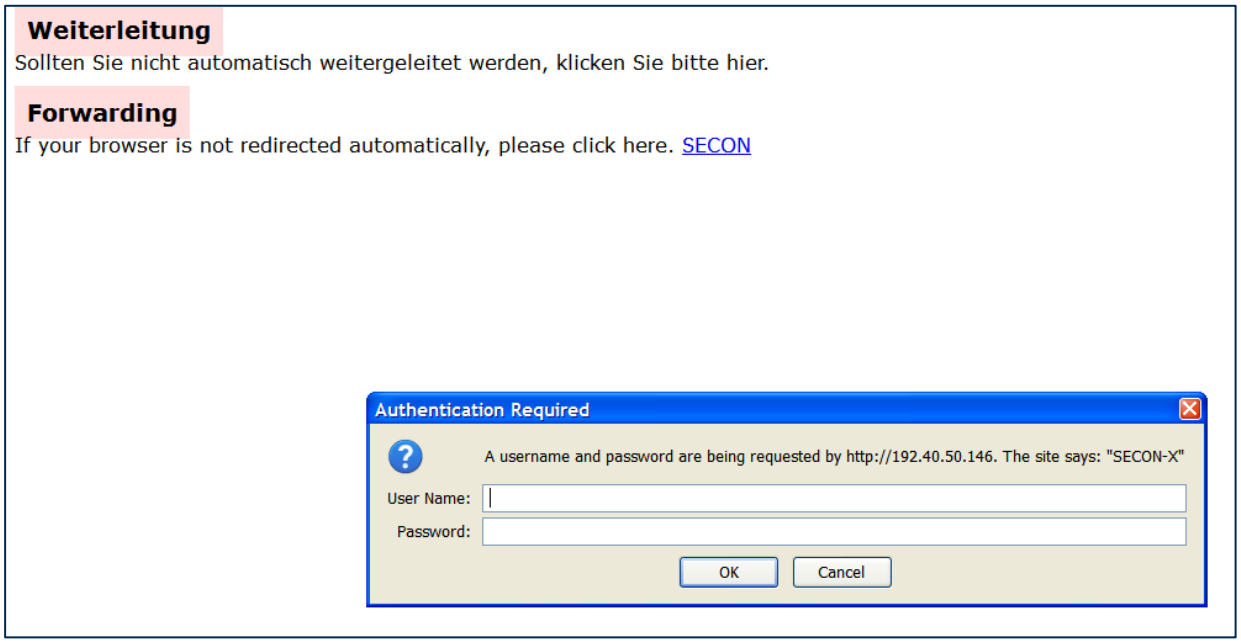
Weiterleitung
Sollten Sie nicht automatisch weitergeleitet werden, klicken Sie bitte hier.
Forwarding
If your browser is not redirected automatically, please click here. SECON
Authentication Required
A username and password are being requested by http://192.40.50.146. The site says: "SECON-X"
User Name:
Password:
OK
Cancel

Figure 21: Verification

User name: *fafnir*
Password: *fafnir22766*

If verification is successful, you will go to the SECON-Vap home page, displaying the SECON clients, by remote access to the selected petrol stations.

3.2 Remote display of the SECON clients

3.2.1 Main View

In main view, the status of the individual VAPORIX-Control / fuelling points is displayed.

Figure 22: Fuelling points

When a fuelling point is selected, the relevant window, showing further details, is displayed (e.g. Figure 3: Fuelling point 1/2).

☞ *The data shown by remote access is identical to the data in the display for the SECON clients (see section 2).*

Figure 23: Fuelling point (ZP) 1/2

If you click on the PLUS sign, the status and measured values for the fuelling point are displayed for the selected date:

Status: OK, WARNING or ERROR

Year-month: Period for which measured values are displayed

Measured values: **show:** Graphic and tabular display of the recorded data (see figure below)

The measured values are displayed in graphic and tabular form:

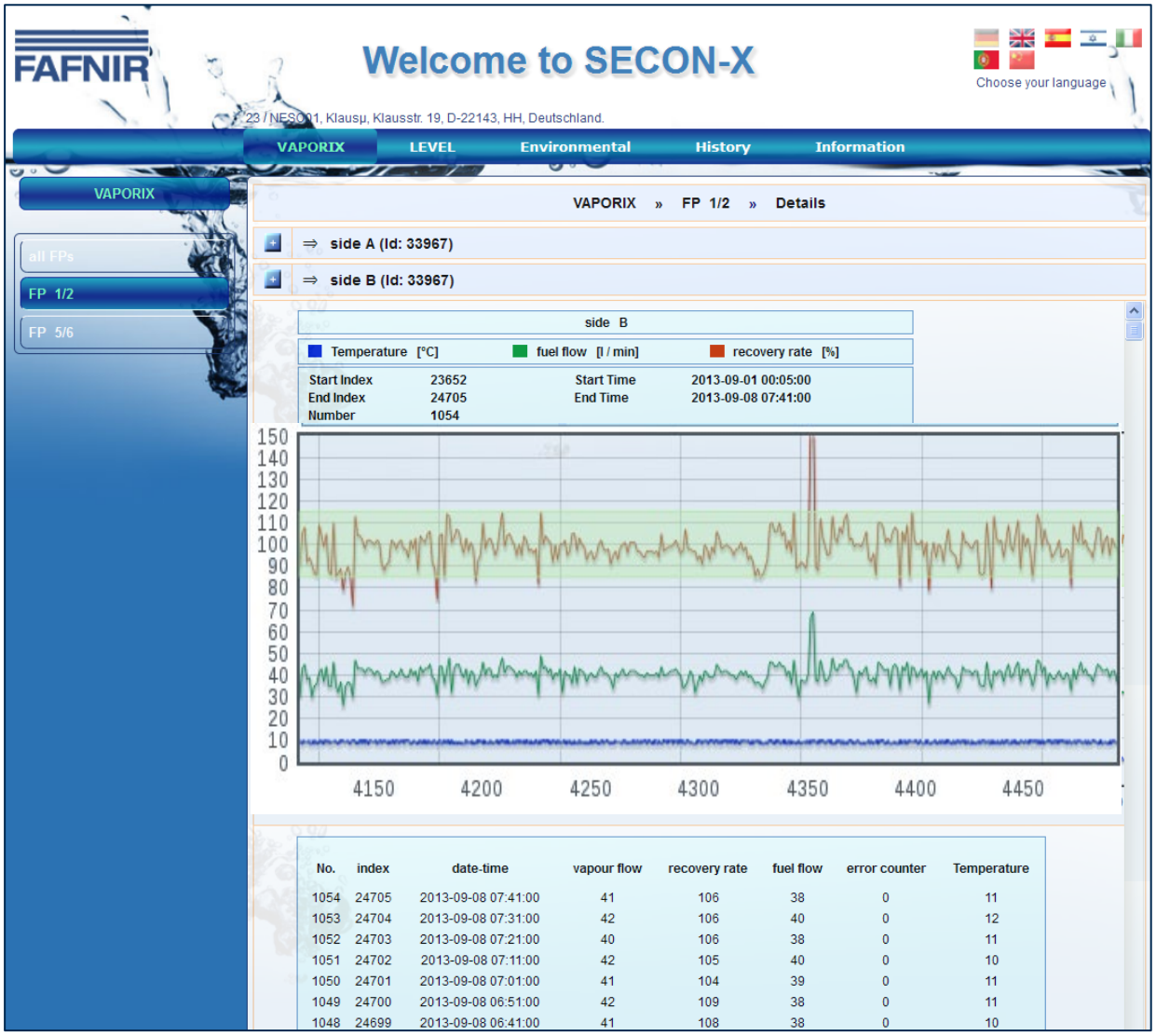

Figure 24: Fuelling point 1/2 – Details – Show

Measured values: **download:** If the user clicks on the required xml file, the data is displayed in tabular form (see figure below). If the user right clicks on the required xml file, a drop-down list is displayed and the file can be downloaded.

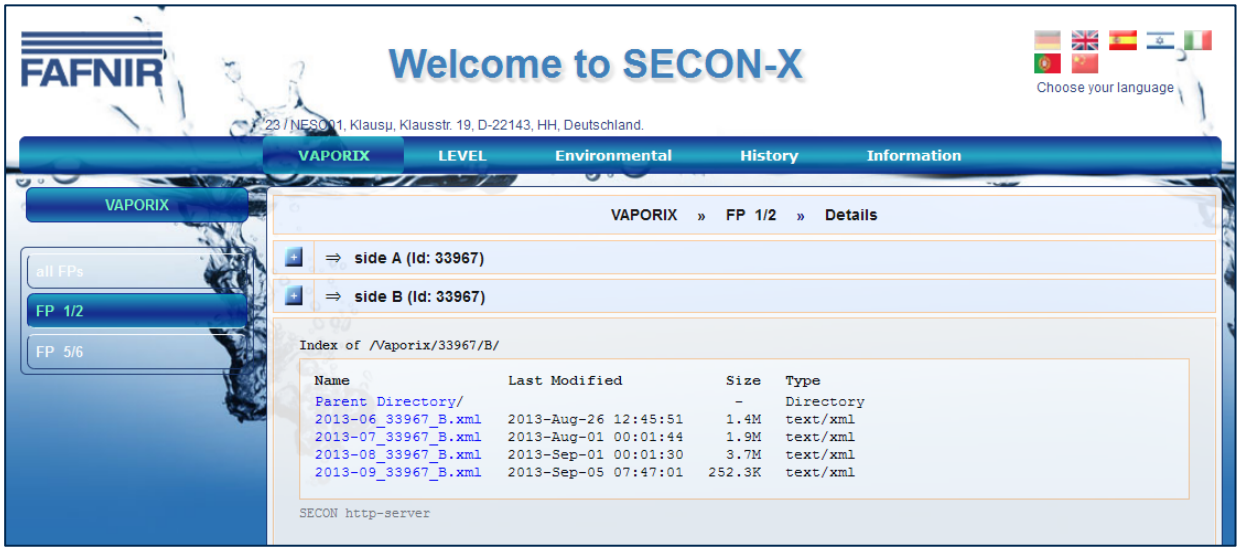

Figure 25: Fuelling point 1/2 – Details – Download

Measured values: **service:** Tabular display of service deployment (see figure below)

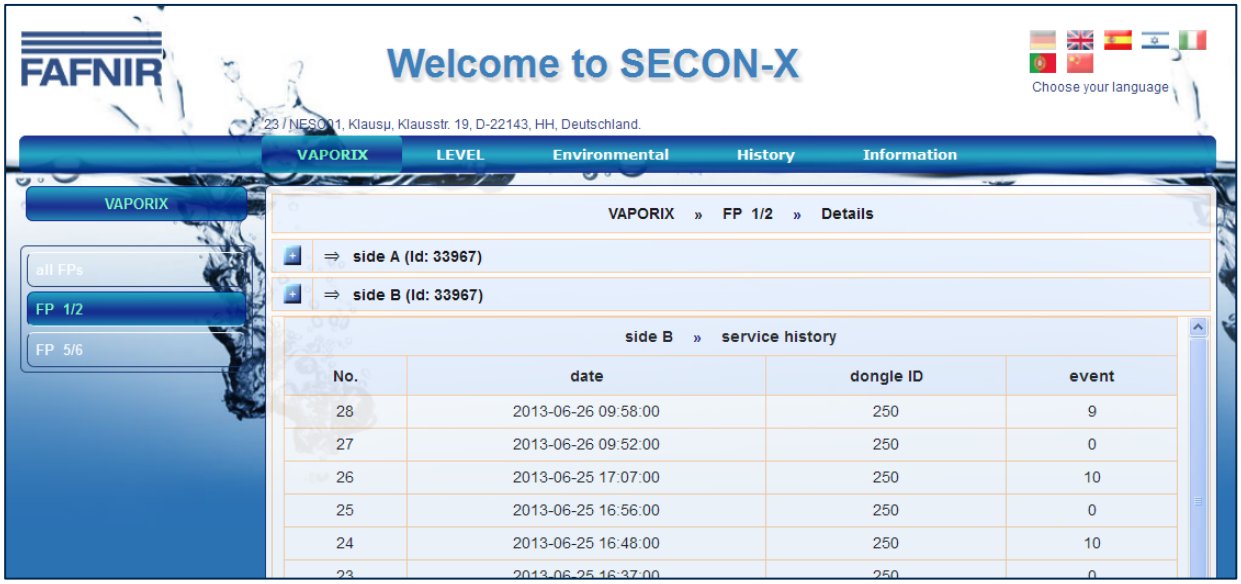

Figure 26: Fuelling point 1/2 – Details – Service

3.2.2 History

History – Downloads

This menu provides central access to history data for the activated services which can be downloaded in xml format for further processing. To do this, select your application (e.g. VAPORIX) in order to obtain access to the SECON client history data. The data is identical to the history data available directly in menu option VAPORIX – Fuelling point – Measured values – Download.

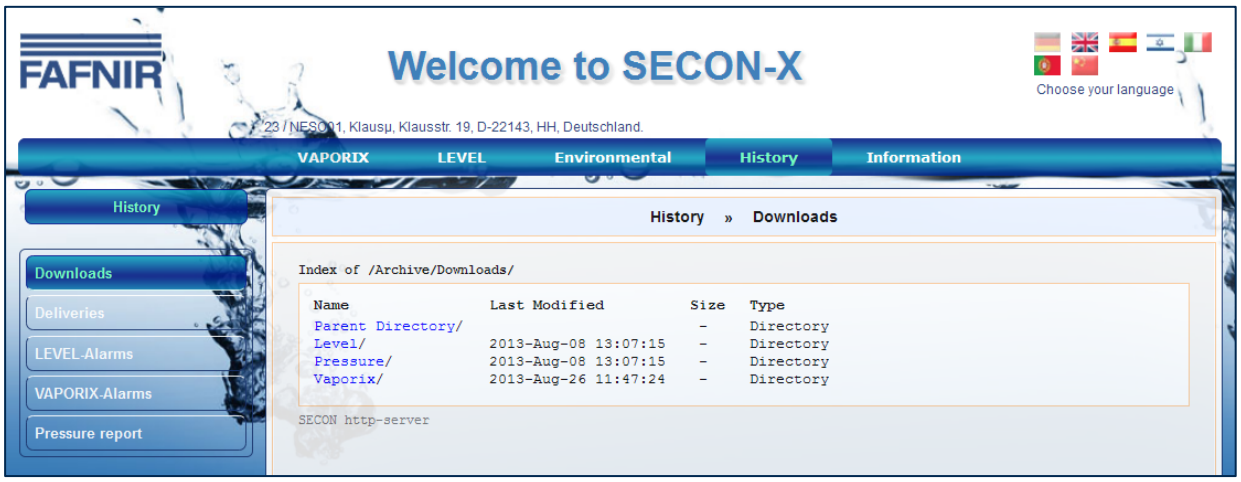

Figure 27: History – Downloads

History – VAPORIX alarms

With this menu option, the history of alarms is listed, sorted by date.

The type of display can be selected broken down by active, inactive or all alarms.

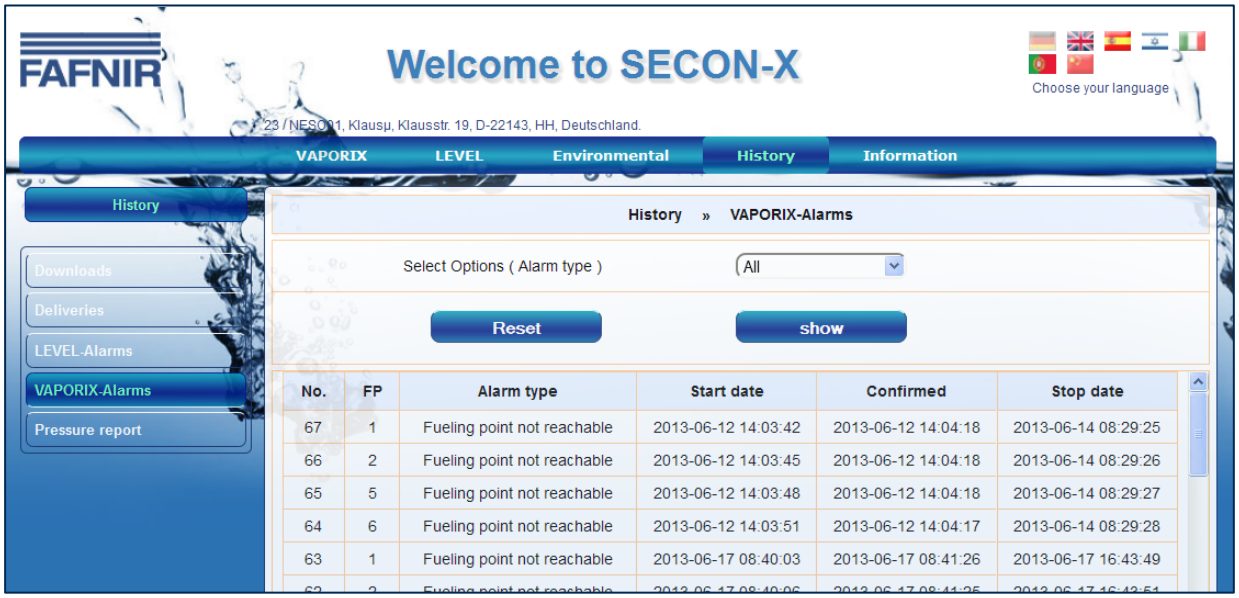
FAFNIR
Welcome to SECON-X
Choose your language
VAPORIX
LEVEL
Environmental
History
Information
History
Downloads
Deliveries
LEVEL-Alarms
VAPORIX-Alarms
Pressure report
History » VAPORIX-Alarms
Select Options (Alarm type)
All
Reset
show
No. FP Alarm type Start date Confirmed Stop date
67 1 Fueling point not reachable 2013-06-12 14:03:42 2013-06-12 14:04:18 2013-06-14 08:29:25
66 2 Fueling point not reachable 2013-06-12 14:03:45 2013-06-12 14:04:18 2013-06-14 08:29:26
65 5 Fueling point not reachable 2013-06-12 14:03:48 2013-06-12 14:04:18 2013-06-14 08:29:27
64 6 Fueling point not reachable 2013-06-12 14:03:51 2013-06-12 14:04:17 2013-06-14 08:29:28
63 1 Fueling point not reachable 2013-06-17 08:40:03 2013-06-17 08:41:26 2013-06-17 16:43:49

Figure 28: VAPORIX alarms (all)

3.2.3 Info

The "Info" menu option in remote access is equivalent to the "Info" menu option of the SECON client (see section 2.1.3 Info).

Figure 29: Information – Station data

Figure 30: Information – Software version

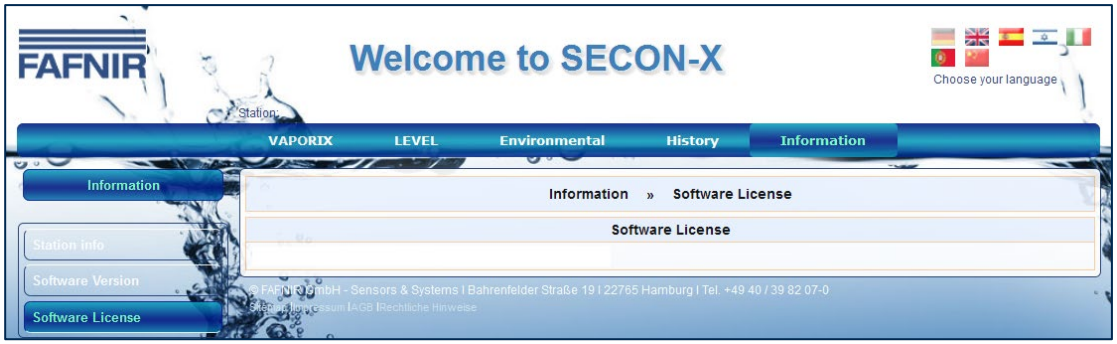

Figure 31: Information – Software licence

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